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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/672,657
Filing Date: September 26, 2003
Appellant(s): BOER ET AL.

Kevin M. Mason
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed *July 21, 2008** appealing from the Office action mailed January 10, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

The present application was filed on September 26, 2003 with claims 1 through 23. Claims 11-17 were cancelled in the Amendment and Response to Office Action dated March 7, 2008. Claims 1-10 and 18-23 are presently pending in the above-identified patent application. Claims 1, 2, 5-10, 18, and 20-23 are rejected under 35 U.S.C. §102(a) as being unpatentable over Wang et al. (United States Patent No. 5,721,733) in view of Currivan et al. (United States Patent Application Publication Number 2003/0026283), and claims 3, 4, 13, 14, and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. in view of Currivan et al. as applied to claims 1, 2, and 18 above, and further in view of Fukuhara (United States Patent Number 6,643,296). Claims 1 and 18 are being appealed.

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NOTE: According to the MPEP §1207.03 III SITUATIONS THAT ARE NOT CONSIDERED AS NEW GROUNDS OF REJECTION, there is no new ground of rejection when the basic thrust of the rejection remains the same such that an appellant has been given a fair opportunity to react to the rejection. In addition, if appellant was advised (through an advisory action) that the amendment would be entered for purposes of appeal, then the examiner's answer may include the rejection(s) of the added or amended claims. Such rejection(s) made in the examiner's answer would not be considered as a new ground of rejection.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

Claims 1, 2, 5-10, 18, and 20-23 are rejected under 35 U.S.C. §102(a) as being unpatentable over Wang et al. (United States Patent No. 5,721,733) in view of Currivan et al. (United States Patent Application Publication Number 2003/0026283).

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NOTE: According to the MPEP §1207.03 III SITUATIONS THAT ARE NOT CONSIDERED AS NEW GROUNDS OF REJECTION, there is no new ground of rejection when the basic thrust of the rejection remains the same such that an appellant has been given a fair opportunity to react to the rejection. In addition, if appellant was advised (through an advisory action) that the amendment would be entered for purposes of appeal, then the examiner's answer may include the rejection(s) of the added or amended claims. Such rejection(s) made in the examiner's answer would not be considered as a new ground of rejection.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,721,733	Wang et al.	2-1998
US 2003/0026283 A1	Curri van et al.	2-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 2, 5-10, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 5,721,733) in view of Currivan et al. (US 2003/0026283).

Regarding claims 1 and 18, Wang et al. disclose a first wireless communication device, comprising:

a controller capable of receiving an acknowledgement (ACK) message transmitted by a second wireless communication device in response to a message transmitted by the first wireless communication device (see column 5 lines 25-43), and a collision detector that monitors a wireless medium for collisions of the acknowledgement message (see column 5 line 66 – column 6 line 8).

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Wang et al. fail to teach the method, wherein the collision detector evaluates an energy level and detects a collision based on the energy level. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module evaluates power indication signal (see paragraph 72), and detects a collision based on the evaluated power indication signal (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal is that it provides a more efficient transmission method.

Regarding claim 2, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the collision detector evaluates an energy level and detects a collision based on the energy level. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module evaluates power indication signal (see paragraph 72), and detects a collision based on the evaluated power indication signal (see paragraph 75 and Table 1).

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Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal is that it provides a more efficient transmission apparatus.

regarding claim 5, the collision detector is activated after the medium access wireless communication device transmits data (see column 5 line 66 – column 6 line 8);

regarding claim 6, the collision detector does not detect a collision if an ACK message or data header is received (see column 5 line 66 – column 6 line 8);

Regarding claim 7, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the device is implemented in accordance with the IEEE 802.11 Standard. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose an 802.11-standard device (see paragraph 130, OFDMA; The modulation scheme used in 802.11 is OFDM).

Thus, it would have been obvious to the person of ordinary skill in the art to utilize an 802.11-standard device as taught by Currivan et al. in the collision detecting apparatus of Wang et al.

The motivation for utilizing an 802.11-standard device in the collision detecting apparatus is that it provides a faster transmission rate and more reliable.

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Regarding claim 8, Wang et al. disclose the communication device, wherein the controller determines if the second wireless communication device correctly received the transmitted message by monitoring the wireless medium (see column 5 line 66 – column 6 line 8);

regarding claim 9, the controller determines that the second wireless communication device did not likely receive the message if a collision is detected (see column 5 line 66 – column 6 line 8);

regarding claim 10, the controller determines that the collision was a cause of not receiving the ACK message (see column 5 line 66 – column 6 line 8).

Regarding claim 20, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the monitoring step further comprises the step of detecting a preamble and the collision detection is further based on a detected preamble. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module detects preamble (see paragraph 71), and detects a collision based on the detected preamble (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

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The motivation for implementing a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble is that it provides a more efficient transmission apparatus.

Regarding claim 21, Wang et al. disclose a method, wherein the monitoring step is performed after the data is transmitted (see column 7 lines 1-3, the mobile user monitors the wireless medium to determine whether an acknowledgement has been transmitted from the hub station after the mobile user transmits a data packet);

regarding claim 22, the monitoring step does not detect a collision if an ACK message or data header is received (see column 6 lines 33-35).

Claims 12, 17, and 23 are then rejected for the same reason as claims 2 and 7 because claims 12, 17, and 23 are method claims for performing the apparatus of claims 2 and 7.

4. Claims 3, 4, 13, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Currivan et al. as applied to claims 1, 2, 11, 12, and 18 above, and further in view of Fukuhara (US 6,643,296).

Regarding claim 3, Wang et al. in view of Currivan et al. disclose all the subject matter of the claimed invention except the communication device, wherein the collision detector includes a payload detector and detects a collision based on a detected payload. However, the invention of Fukuhara from the same or similar fields of endeavor discloses a collision detection means for detecting the occurrence of collision based on the payload of a data frame (see column 4 lines 52-63).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection means for detecting the occurrence of collision based on the payload of a data frame as taught by Fukuhara into the collision detecting apparatus of Wang et al. in view of Currivan et al.

The motivation for implementing a collision detection means for detecting the occurrence of collision based on the payload of a data frame is that it provides a more efficient transmission apparatus.

Regarding claim 4, Wang et al. disclose all the subject matter of the claimed invention except the communication device, wherein the collision detector includes a preamble detector and detects a collision based on a detected preamble. The invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module detects preamble (see paragraph 71), and detects a collision based on the detected preamble (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble is that it provides a more efficient transmission apparatus.

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Claims 13, 14, and 19 are then rejected for the same reason as claims 3 and 4 because claims 13, 14, and 19 are method claims for performing the apparatus of claims 3 and 4.

(10) Response to Argument

Regarding claims 1 and 18, the Appellants argue that a SNR is a signal-to-noise ratio and is not a measure energy level (i.e., not a measured level of energy), as would be apparent to a person of ordinary skill in the art. Currivan does not disclose or suggest determining a measured energy level or determining if a measured energy level exceeds a predefined threshold.

In response to Appellants' argument, the Examiner respectfully disagrees with the argument above.

Currivan et al., from the same or similar fields of endeavor as Wang et al., disclose a comparator receiving a SNR indication signal and a threshold signal having a threshold value T2, then the comparator compares these inputs and generates an output signal 459 that indicates the result of this comparison (see paragraph 74), wherein the output signal 459 indicates the average SNR of the data portion of a burst transmission (see paragraph 76). In Table 1 under column "Output Signal 459," there are two levels of the measured SNR: High and Low. When the Output Signal 459 is detected to be at the level Low, which the Examiner interprets to be above a predefined threshold, the collision is detected (see Table 1). Thus, it would have been obvious to the person of ordinary skill in the art to implement the method as taught by Currivan et

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al. into the method of Wang et al. The motivation for implementing the method of detecting a collision if a measured energy level exceeds a predefined threshold is that it provides a collision-free transmission, which increases the efficiency of the transmission system.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Pao Sinkantarakorn/

Examiner, Art Unit 2416

Conferees:

/Ricky Ngo/

Supervisory Patent Examiner, Art Unit 2616

/Chi H Pham/

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